

## Abstract

Title of the invention: Method for detection of impedances, method for qualification of telephone lines

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The invention relates to a method for detection of impedances, in particular along inductances, in telephone lines of the type with two metal wires as signal conductors (twisted pair), having the following

10 method steps:

a test signal in the form of an AC voltage is fed into the telephone line,

a measurement signal of the reflection signal of the test signal is measured, which can be tapped off the

15 input impedance of the entire line at the start of the line,

the first method steps are carried out at a number of different frequencies within a preselected frequency range of the AC voltage of the test signal,

20 the profile of the measurement signals is analyzed as a function of the frequency, with

the derivative of the profile of the measurement signals being formed based on the frequency,

at which point the second derivative of the profile of

25 the measurement signals is formed based on the frequency,

the profile of the second derivative of the profile of the measurement signals based on the frequency is investigated for one or more mathematical sign changes.

30 The invention also relates to a method for qualification of telephone lines of the type with two metal wires as signal conductors (twisted pair) for suitability for data transmissions based on the DSL Standard, and to use of a DSL modem for carrying out  
35 methods such as this.

(Figure 11)